Research Department
Federal Reserve
Bank of
San Francisco

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FRBSF Weekly Letter

Ending the Lag

Last month, the long-debated switch from lagged reserve accounting (LRR) to contemporaneous reserve accounting (CRR) took place. This arcane subject has been a major "bone" of contention among monetary economists and policymakers for the last fifteen years. One side has argued that implementing CRR is essential if the Federal Reserve is to have close control over the monetary aggregates, and that such control is necessary if monetary policies are to be effective. Others have asserted that this regulatory change would have little, if any, appreciable effect on monetary control, and that close short-run monetary control would be undesirable. The purpose of this *Letter* is to describe the main features of CRR and how the change in rules is likely to alter the Federal Reserve's methods for controlling money in the short-run, and thereby affect interest rates and the economy.

Regulations on reserves

Under the Monetary Control Act of 1980 (MCA), all deposit-taking institutions—commercial and savings banks, savings and loan associations and credit unions—are required to hold reserves equal to specified proportions of certain categories of their outstanding deposits. When the MCA is fully phased in (the phase-in has been completed for all but nonmember institutions), most transaction (checkable) deposits in M1 will carry reserve requirements of 12 percent, and the non-personal time, savings and money market deposit accounts in M2 and M3 will have 3 percent requirements. All other deposits in M2 and M3 are free of reserve requirements.

Lagged reserve accounting was introduced in 1968. In a given statement week, LRR meant that the level of reserves which an institution was required to hold depended on its deposits outstanding two weeks earlier. Under the new CRR system, the statement period is lengthened from one week to two, and the lag between deposits and required reserves is reduced from two weeks to two days. Thus, during a given two-week "reserve maintenance period," which begins on a Thursday and ends on the second Wednesday, a bank's required reserves will depend on its transaction deposits in the two-week "reserve computation period" which ended on the preceding Monday. The two systems are shown in the chart.

The new system applies only to the transaction (checkable) accounts in M1: reserve requirements against non-transaction deposits will continue to be computed on a lagged basis. The new lagged system will differ from the old, however, in that the maintenance and computation periods are both two weeks in length, and the beginning of the maintenance period lags the end of the previous computation period by 17 days. This feature of the new reserve accounting rules, together with the features of the MCA discussed above, mean that the entire reserve accounting system is now set up to provide for a close link between M1 and reserves, but only a weak link between the broader aggregates and reserves.

Operating procedures

The significance of CRR for M1 control will depend on the Fed's so-called short-run operating procedures. The Fed could minimize the importance of CRR by using the federal funds rate as a tool for controlling M1, as it did prior to October 1979. Under this procedure, if the Fed wished, for example, to lower M1 growth, it would raise the federal funds rate in an attempt to reduce the public's demand to hold M1 and to induce banks to supply fewer deposits. This reduction in M1 would lead to a reduction in required reserves. Under LRR, reserves would fall with a lag of two weeks, whereas under CRR they would fall contemporaneously. However, this difference would have

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no significance for monetary control because changes in reserves would merely be incidental by-products of monetary control, not the causal factor.

Alternatively, the Fed may choose to control M1 through a reserve aggregate. In this case, the choice between lagged and contemporaneous accounting could become an important monetary policy issue. The link between reserves and M1 depends very much on reserve requirements. With a twelve percent reserve requirement, for example, every $100 change in deposits is associated with a $12 change in required reserves. Thus, if the Fed reduces the quantity of total reserves available to the banking system, total bank deposits must fall.

Since the link between required reserves and deposits is contemporaneous under CRR, the Fed can use *total* reserves as a means of controlling M1. This is because, with CRR, banks as a group influence their *current* period's required reserves through changes in *current* deposits. Thus, the Fed can provide a fixed quantity of total reserves and force the banking system to adjust its current deposits and, thereby, required reserves, accordingly. Under LRR, this approach is not feasible because the link between current deposits and required reserves is broken. Banks enter any given week with a predetermined or unchangeable quantity of required reserves. Unless the Fed wanted to force the banking system into a deficiency, it had to provide the quantity of reserves demanded by the banking system. This meant that the Fed was effectively prevented from controlling the money stock by changing *total* reserves.

Some critics of the Fed have argued that the inability to use total reserves was a major disadvantage of LRR. They asserted that if the Fed wanted to use reserves to control M1, as it did after October 1979, it had to do so through a less direct and inferior linkage. To use a reserves approach under LRR, the Fed had to influence the stock of money by varying the share of total reserves which it provided to banks through the discount window, that is, by altering the ratio of borrowed to nonborrowed reserves. If the Fed wished to slow M1 growth, it sold government securities to reduce the supply of nonborrowed reserves. With no change in the (predetermined) level of required reserves, this meant that borrowed reserves had to rise. Banks are reluctant to borrow from the discount window, however, since they are discouraged from doing so through administrative pressures when other sources of funds are reasonably available. Thus, when the Fed reduced the supply of nonborrowed reserves, banks would first try to meet deficiencies through the federal funds market. The resultant increase in the funds rate relative to the discount rate not only induced banks to borrow from the Fed but also slowed M1 growth, as the public's demand to hold M1 decelerated.

This nonborrowed reserves method also could be applied under CRR. Even under this indirect approach, CRR has an advantage over the lagged rules. Under CRR, unexpected changes in the public's demand to hold M1 cause a quicker interest rate response, which helps bring M1 back to target more quickly. Assume for the moment that the public's demand for money increases. This causes an immediate increase in required reserves under CRR. If the Fed holds nonborrowed reserves constant, the added demand for reserves causes an immediate and automatic rise in the funds rate so that the unexpected growth in M1 is slowed more quickly.

Under LRR, the funds rate increase took two weeks because required reserves lagged behind deposits by that length of time. The delay of any offsetting interest rate movements was a disadvantage because it allowed deviations of M1 from target to persist longer. A two week speed-up in response is important for close monthly control, but opinions differ as to its impor-

tance for controlling M1 on a quarterly or longer basis.

Policy debate

The ability afforded by CRR to use a total reserves operating procedure as well as CRR's faster interest rate responses are viewed as major advantages by some economists. They argue that volatility in the growth of the monetary aggregates has led to cyclical movements in the economy, and that the resulting economic uncertainty has raised real (inflation-adjusted) interest rates. They see CRR as a way to lessen the disruptive influence of volatile money growth.

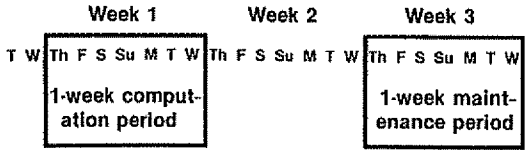
Other economists disagree. They argue that close short-run M1 control would require extreme volatility in interest rates in the short-run, and that this would be detrimental to the performance of the economy because it would disrupt financial flows. They also argue that it makes little sense to control money precisely because money's relationship with economic activity frequently changes (possibly because of financial innovation and deregulation).

It appears unlikely that the experience of the near future will resolve these arguments. The current contemporaneous reserve requirement rules may help the Fed to control M1, but they provide no great advantage in controlling the broader aggregates. However, since October 1982, the Fed has given less policy weight to M1 in favor of M2 and M3 as intermediate targets of monetary policy. The importance of the broader aggregates was confirmed in the Fed's recent *Monetary Policy Report to Congress*.

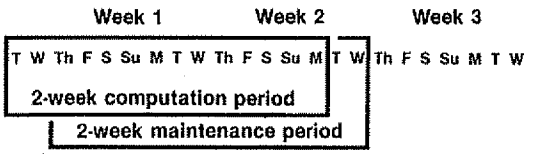
The main concern of the Fed appears to be that the introduction of NOW and other new accounts in recent years may have changed the behavior of M1 significantly enough to make its relationship with GNP less reliable than it once was. The *Monetary Policy Report* states that "while there is evidence of more normal and predictable patterns reappearing, the (Federal Open Market) Committee felt that more time would be required for assessing the impact of structural changes on public and institutional behavior before full or primary weight could be placed on M1 as a policy guide." Discussing CRR, the *Report* argued that the choice of operating procedures "...does not depend on the technical characteristics of the reserve requirement system in place but rather on broader policy judgments about the relative weight to be given M1 as a target and the desirability of seeking close short-run control of that aggregate." As a result, it decided not to make any substantial change in current operating procedures at this time. CRR thus will have little effect on monetary policy in the immediate future.

John P. Judd and Brian Motley

Lagged Reserve Accounting System



Contemporaneous Reserve Accounting System*



*Transaction Deposits Only

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BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT

(Dollar amounts in millions)

Selected Assets and Liabilities Large Commercial Banks	Amount Outstanding 3/14/84	Change from 3/7/84	Change from year ago Dollar	Change from year ago Percent
Loans, Leases and Investments[1] [2]	176,216	– 475	190	.5
Loans and Leases[1] [6]	155,933	– 465	578	1.6
Commercial and Industrial	46,511	– 104	548	5.0
Real estate	59,349	72	450	3.2
Loans to Individuals	26,990	42	339	5.3
Leases	5,005	– 5	– 56	– 4.7
U.S. Treasury and Agency Securities[2]	12,190	5	– 316	– 10.6
Other Securities[2]	8,092	– 15	– 70	– 3.6
Total Deposits	185,745	83	– 5,251	– 11.5
Demand Deposits	43,509	181	– 5,727	– 48.8
Demand Deposits Adjusted[3]	29,294	228	– 2,037	– 27.3
Other Transaction Balances[4]	12,278	– 189	– 496	– 16.3
Total Non-Transaction Balances[6]	129,958	91	973	3.2
Money Market Deposit Accounts—Total	40,495	– 29	898	9.5
Time Deposits in Amounts of $100,000 or more	38,005	31	– 159	– 1.8
Other Liabilities for Borrowed Money[5]	18,771	– 555	– 4,235	– 77.2

Weekly Averages of Daily Figures	Week ended 3/14/84	Week ended 3/7/84	Comparable year-ago period
Reserve Position, All Reporting Banks			
Excess Reserves (+)/Deficiency (–)	NA	NA	NA
Borrowings	NA	NA	NA
Net free reserves (+)/Net borrowed(–)	NA	NA	NA

[1] Includes loss reserves, unearned income, excludes interbank loans
[2] Excludes trading account securities
[3] Excludes U.S. government and depository institution deposits and cash items
[4] ATS, NOW, Super NOW and savings accounts with telephone transfers
[5] Includes borrowing via FRB, TT&L notes, Fed Funds, RPs and other sources
[6] Includes items not shown separately

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